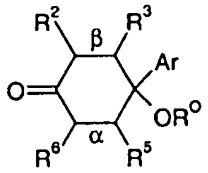
AMENDMENTS TO THE CLAIMS

Amend the claimed as follows:

Claims 1-89. (Canceled)

90. (new) A compound having the following formula:



(1)

wherein:

Ar is a 1-(sulfonyl)-1H-indol-2-yl group;

the group -OR^O is independently:

(a) -OH;

(b) an ether group; or:

(c) an acyloxy group;

the bond marked α is independently:

(a) a single bond; or:

(b) a double bond;

the bond marked β is independently:

(a) a single bond; or:

(b) a double bond;

each of R^2, R^3, R^5, and R^6, is independently a ring substituent and is:

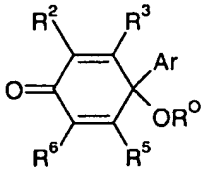
(a) H;

(b) a monovalent monodentate substituent; or:

(c) a ring substituent which, together with an adjacent ring substituent, and together with the ring atoms to which these ring substituents are attached, form a fused ring;

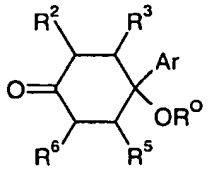
and pharmaceutically acceptable salts, esters, amides, solvates, hydrates, and protected forms thereof.

91. (new) A compound according to claim 90, wherein α is independently a double bond and β is independently a double bond, and the compound has the following formula:



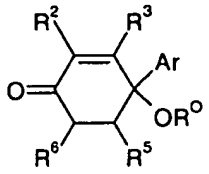
(2)

92. (new) A compound according to claim 90, wherein α is independently a single bond and β is independently a single bond and the compound has the following formula:



(3)

93. (new) A compound according to claim 90, wherein α is independently a single bond and β is independently a double bond, and the compound has the following formula:



(4)

94. (new) A compound according to claim 90, wherein said monovalent monodentate substituent is selected from:

hydroxy (-OH);

halo;

cyano (-CN);

carboxy (-COOH);

azido;

ester;

amino, including:

C_{1-7}alkyl-amino;

amino-C_{1-7}alkyl-amino;

C_{1-7}alkyl, including:

halo-C_{1-7}alkyl;

amino-C_{1-7}alkyl;

carboxy-C_{1-7}alkyl;

hydroxy-C_{1-7}alkyl;

C_{5-20}aryl-C_{1-7}alkyl;

ether, including:

C_{1-7}alkoxy;

halo-C_{1-7}alkoxy;

amino-C_{1-7}alkoxy;

carboxy-C_{1-7}alkoxy;

hydroxy-C_{1-7}alkoxy;

C_{5-20}aryl-C_{1-7}alkoxy;

acyl, including:

C_{1-7}alkyl-acyl;

halo-C_{1-7}alkyl-acyl;

amino-C_{1-7}alkyl-acyl;

carboxy-C_{1-7}alkyl-acyl;

hydroxy-C_{1-7}alkyl-acyl;

C_{5-20}aryl-C_{1-7}alkyl-acyl;

C_{5-20}aryl-acyl;

C_{5-20}aryl;

thiol (-SH); and,

thioether.

95. (new) A compound according to claim 90, wherein said monovalent monodentate substituent is selected from:

-OH;

-F, -Cl, -Br, -I;

-CN;

-COOH;

$-N_3$;

-COOMe, -COOEt, -COOtBu, -COOPh, $-COOCH_2Ph$;

$-NH_2$, -NHMe, -NHEt, $-NMe_2$, $-NEt_2$;

piperidino, morpholino, piperazino, N-methyl-piperazino;

$-NH(CH_2)_w-NH_2$, $-NH(CH_2)_w-NHMe$, $-NH(CH_2)_w-NMe_2$, $-NH(CH_2)_w-NEt_2$;

-Me, -Et, -nPr, -iPr, -nBu, -iBu, -sBu, -tBu;

$-CH_2F$, $-CH_2Cl$, $-CF_3$, $-CCl_3$, $-CF_2CF_3$, $-CH_2CF_3$, $-C(CF_3)_3$;

$-(CH_2)_w-NH_2$, $-(CH_2)_w-NHMe$, $-(CH_2)_w-NMe_2$, $-(CH_2)_w-NEt_2$;

$-(CH_2)_w-COOH$;

$-(CH_2)_w-OH$;

$-CH_2Ph$;

-OMe, -OEt, -OnPr, -OiPr, -OnBu, -OiBu, -OsBu, -OtBu;

$-OCH_2F$, $-OCH_2Cl$, $-OCF_3$, $-OCCl_3$, $-OCF_2CF_3$, $-OCH_2CF_3$, $-OC(CF_3)_3$;

$-O(CH_2)_w-NH_2$, $-O(CH_2)_w-NHMe$, $-O(CH_2)_w-NMe_2$, $-O(CH_2)_w-NEt_2$;

$-O(CH_2)_w-COOH$;

$-O(CH_2)_w-OH$;

$-OCH_2Ph$;

$-C(=O)Me$, $-C(=O)Et$, $-C(=O)-nPr$, $-C(=O)-iPr$, $-C(=O)-nBu$, $-C(=O)-iBu$, $-C(=O)-sBu$, $-C(=O)-tBu$;

$-C(=O)CH_2F$, $-C(=O)CH_2Cl$, $-C(=O)CF_3$, $-C(=O)CCl_3$, $-C(=O)CF_2CF_3$, $-C(=O)CH_2CF_3$, $-C(=O)C(CF_3)_3$;

$-C(=O)(CH_2)_w-NH_2$, $-C(=O)(CH_2)_w-NHMe$, $-C(=O)(CH_2)_w-NMe_2$, $-C(=O)(CH_2)_w-NEt_2$;

$-C(=O)(CH_2)_w-COOH$;

$-C(=O)(CH_2)_w-OH$;

$-C(=O)CH_2Ph$;

-Ph;

-SH;

-SMe, -SEt, -SnPr, -S-iPr, -S-nBu, -S-iBu, -S-sBu, -S-tBu,

$-S-CH_2-Ph$, -S-Ph;

a thioether group derived from cysteine, homocysteine, glutathione, or a peptide comprising the sequence -Cys-$(X)_y$-Cys-, where X is an amino acid, and y is an integer from 1 to 6;

wherein w is an integer from 1 to 7.

96. (new) A compound according to claim 90, wherein each of R^2, R^3, R^5, and R^6, is independently a ring substituent and is:

(a) H; or:

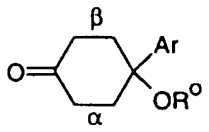
(b) a monovalent monodentate substituent.

97. (new) A compound according to claim 91, wherein each of R^2, R^3, R^5, and R^6, is independently a ring substituent and is:

(a) H; or:

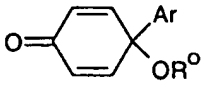
(b) a monovalent monodentate substituent.

98. (new) A compound according to claim 90, wherein R^2, R^3, R^5 and R^6 are -H:



(9)

99. (new) A compound according to claim 90, wherein R^2, R^3, R^5 and R^6 are -H; α is a double bond; and β is a double bond:



(11)

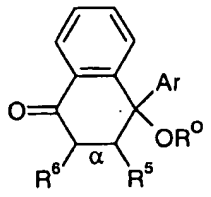
100. (new) A compound according to claim 90, wherein

(a) R^2 and R^3, together with the ring atoms to which they are attached, form a fused ring; or

(b) R^5 and R^6, together with the ring atoms to which they are attached, form a fused ring; or

(c) or both (a) and (b).

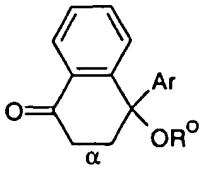
101. (new) A compound according to claim 99, wherein R^2 and R^3 form a fused benzene ring; and β is a double bond:



(14)

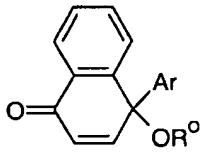
102. (new) A compound according to claim 101, wherein R^5 and R^6 do not also form a fused ring.

103. (new) A compound according to claim 99, wherein R^2 and R^3 form a fused benzene ring; β is a double bond; and R^5 and R^6 are -H:



(17)

104. (new) A compound according to claim 99, wherein R^2 and R^3 form a fused benzene ring; β is a double bond; R^5 and R^6 are -H; and α is a double bond:



(18)

105. (new) A compound according to claim 90, wherein R^O is independently:

(a) -H;

(b) C_{1-7}alkyl, C_{3-20}heterocyclyl, or C_{5-20}aryl; and is optionally substituted;

or:

(c) C_{1-7}alkyl-acyl, C_{3-20}heterocyclyl-acyl, or C_{5-20}aryl-acyl; and is optionally substituted.

106. (new) A compound according to claim 104, wherein R^O is optionally substituted with one more of the following groups:

hydroxy (-OH);

halo;

carboxy (-COOH);

amino; and,

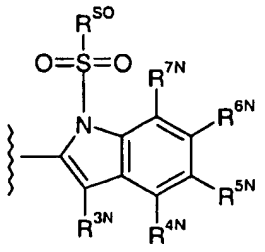
C_{5-20}aryl.

107. (new) A compound according to claim 90, wherein R^O is -H.

108. (new) A compound according to claim 91, wherein R^O is -H.

109. (new) A compound according to claim 99, wherein R^O is -H.

110. (new) A compound according to claim 90, wherein Ar is a group of the following formula:



wherein:

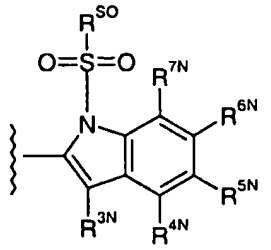
R^{SO} is independently a sulfonyl substituent; and

each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently an indolyl subsitutent.

111. (new) A compound according to claim 110, wherein R^{SO} is C_{1-7}alkyl, C_{3-20}heterocyclyl, or C_{5-20}aryl; and is optionally substituted.

112. (new) A compound according to claim 110, wherein R^{SO} is C_{5-20}aryl; and is optionally substituted.

113. (new) A compound according to claim 99, wherein Ar is a group of the following formula:

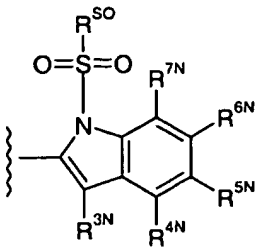


wherein:

R^{SO} is independently C_{5-20}aryl; and is optionally substituted; and

each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently an indolyl subsitutent.

114. (new) A compound according to claim 104, wherein Ar is a group of the following formula:

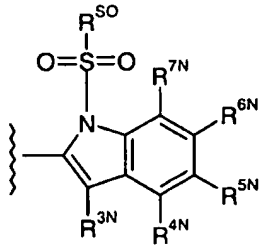


wherein:

R^{SO} is independently C_{5-20}aryl; and is optionally substituted; and

each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently an indolyl subsitutent.

115. (new) A compound according to claim 109, wherein Ar is a group of the following formula:



wherein:

R^{SO} is independently C_{5-20}aryl; and is optionally substituted; and

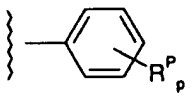
each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently an indolyl subsitutent.

116. (new) A compound according to claim 110, wherein R^{SO} is phenyl or naphthyl; and is optionally substituted.

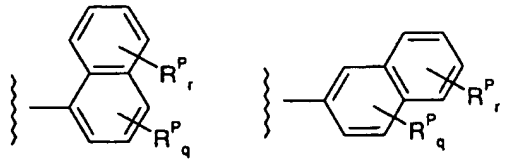
117. (new) A compound according to claim 110, wherein R^{SO} is naphthyl; and is optionally substituted.

118. (new) A compound according to claim 110, wherein R^{SO} is phenyl; and is optionally substituted.

119. (new) A compound according to claim 110, wherein R^{SO} is selected from:



wherein p is an integer from 0 to 5, and each R^P is a phenyl substituent; and



wherein q is an integer from 0 to 3; r is an integer from 0 to 4; and each R^P is a naphthyl substituent.

120. (new) A compound according to claim 119, wherein each R^P is independently selected from:

hydroxy (-OH);

halo;

cyano (-CN);

carboxy (-COOH);

azido;

ester;

amino, including:

amino-C_{1-7}alkyl-amino;

C_{1-7}alkyl, including:

halo-C_{1-7}alkyl;

amino-C_{1-7}alkyl;

carboxy-C_{1-7}alkyl;

hydroxy-C_{1-7}alkyl;

C_{5-20}aryl-C_{1-7}alkyl;

ether, including:

C_{1-7}alkoxy;

halo-C_{1-7}alkoxy;

amino-C_{1-7}alkoxy;

carboxy-C_{1-7}alkoxy;

hydroxy-C_{1-7}alkoxy;

C_{5-20}aryl-C_{1-7}alkoxy;

acyl, including:

C_{1-7}alkyl-acyl;

halo-C_{1-7}alkyl-acyl;

amino-C_{1-7}alkyl-acyl;

carboxy-C_{1-7}alkyl-acyl;

hydroxy-C_{1-7}alkyl-acyl;

C_{5-20}aryl-C_{1-7}alkyl-acyl;

C_{5-20}aryl-acyl;

C_{5-20}aryl.

121. (new) A compound according to claim 119, wherein each R^P is independently selected from:

-OH;

-F, -Cl, -Br, -I;

-CN;

-COOH;

$-N_3$;

-COOMe, -COOEt, -COOtBu, -COOPh, $-COOCH_2Ph$;

$-NH_2$, -NHMe, -NHEt, $-NMe_2$, $-NEt_2$;

piperidino, morpholino, piperazino, N-methyl-piperazino;

$-NH(CH_2)_w-NH_2$, $-NH(CH_2)_w-NHMe$, $-NH(CH_2)_w-NMe_2$, $-NH(CH_2)_w-NEt_2$;

-Me, -Et, -nPr, -iPr, -nBu, -iBu, -sBu, -tBu;

$-CH_2F$, $-CH_2Cl$, $-CF_3$, $-CCl_3$, $-CF_2CF_3$, $-CH_2CF_3$, $-C(CF_3)_3$;

$-(CH_2)_w-NH_2$, $-(CH_2)_w-NHMe$, $-(CH_2)_w-NMe_2$, $-(CH_2)_w-NEt_2$;

$-(CH_2)_w-COOH$;

$-(CH_2)_w-OH$;

$-CH_2Ph$;

-OMe, -OEt, -OnPr, -OiPr, -OnBu, -OiBu, -OsBu, -OtBu;

$-OCH_2F$, $-OCH_2Cl$, $-OCF_3$, $-OCCl_3$, $-OCF_2CF_3$, $-OCH_2CF_3$, $-OC(CF_3)_3$;

$-O(CH_2)_w-NH_2$, $-O(CH_2)_w-NHMe$, $-O(CH_2)_w-NMe_2$, $-O(CH_2)_w-NEt_2$;

$-O(CH_2)_w-COOH$;

$-O(CH_2)_w-OH$;

$-OCH_2Ph$;

-C(=O)Me, -C(=O)Et, -C(=O)-nPr, -C(=O)-iPr, -C(=O)-nBu, -C(=O)-iBu, -C(=O)-sBu, -C(=O)-tBu;

$-C(=O)CH_2F$, $-C(=O)CH_2Cl$, $-C(=O)CF_3$, $-C(=O)CCl_3$, $-C(=O)CF_2CF_3$, $-C(=O)CH_2CF_3$, $-C(=O)C(CF_3)_3$;

-C(=O) $(CH_2)_w$-NH_2, -C(=O) $(CH_2)_w$-NHMe, -C(=O) $(CH_2)_w$-NMe_2, -C(=O)$(CH_2)_w$-NEt_2;

-C(=O) $(CH_2)_w$-COOH;

-C(=O) $(CH_2)_w$-OH;

-C(=O)CH_2Ph;

-Ph;

wherein w is an integer from 1 to 7.

122. (new) A compound according to claim 119, wherein each R^P is independently selected from: -F, -Cl, -Br, -I, -Me, -Et, -OMe, -OEt.

123. (new) A compound according to claim 119, wherein each R^P is independently selected from: -F, -Me, -OMe.

124. (new) A compound according to claim 120, wherein each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently -H, or as defined for R^P.

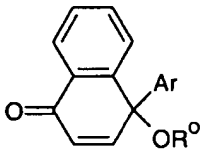
125. (new) A compound according to claim 120, wherein each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently selected from:

-H, -F, -Cl, -Br, -I, -Me, -Et, -OMe, -OEt.

126. (new) A compound according to claim 120, wherein each of R^{3N}, R^{4N}, R^{6N}, and R^{7N} is -H.

127. (new) A compound selected from compounds having the following formulae and pharmaceutically acceptable salts, esters, amides, solvates, hydrates, and protected forms thereof:

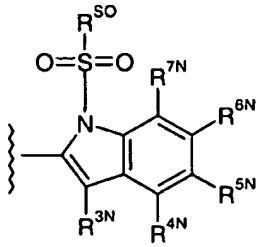
(11)



(18)

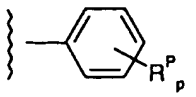
wherein R^O is -H;

wherein Ar is a group of the following formula:

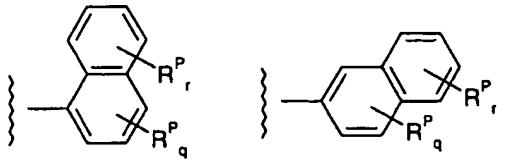


wherein:

R^{SO} is selected from:



wherein p is an integer from 0 to 5, and each R^P is a phenyl substituent; and



wherein q is an integer from 0 to 3; r is an integer from 0 to 4; and each R^P is a naphthyl substituent;

and wherein:

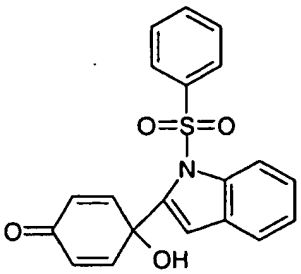
each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently an indolyl subsitutent.

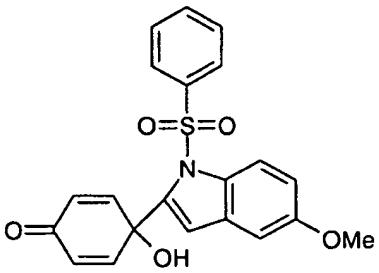
128. (new) A compound according to claim 127, wherein:

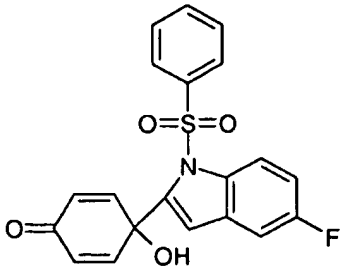
each R^P is independently selected from: -F, -Cl, -Br, -I, -Me, -Et, -OMe, -OEt; and

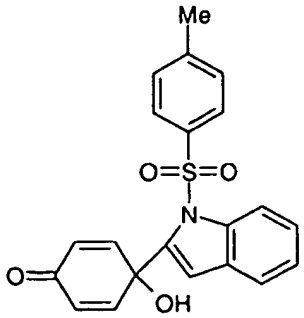
each of R^{3N}, R^{4N}, R^{5N}, R^{6N}, and R^{7N} is independently selected from: -H, -F, -Cl, -Br, -I, -Me, -Et, -OMe, -OEt.

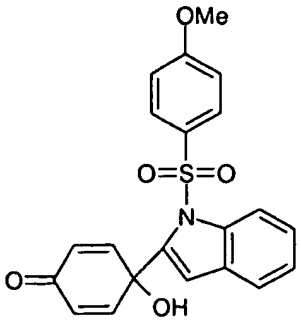
129. (new) A compound selected from the following compounds and pharmaceutically acceptable salts, esters, amides, solvates, hydrates, and protected forms thereof:

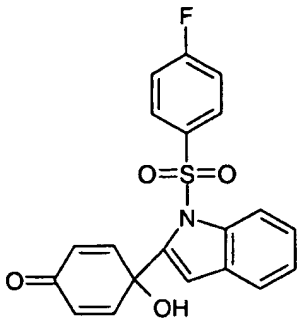


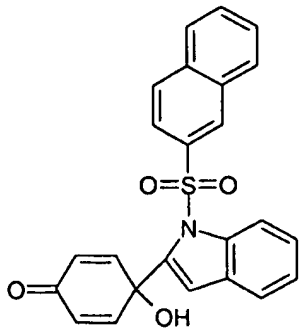


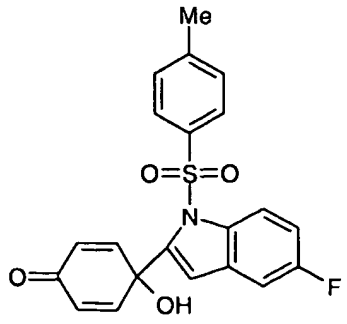


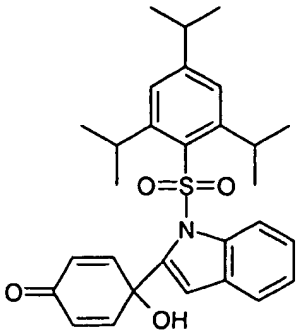


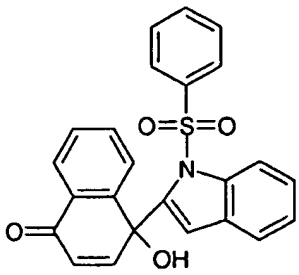

OMe
O=S=O
N
O
OH

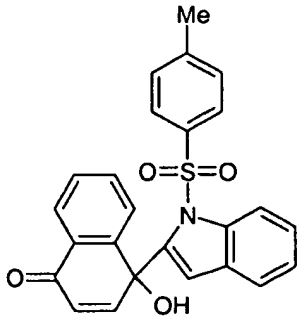

F
O=S=O
N
O
OH

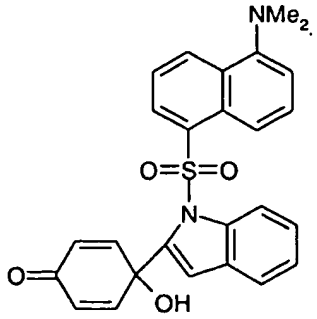

O=S=O
N
O
OH

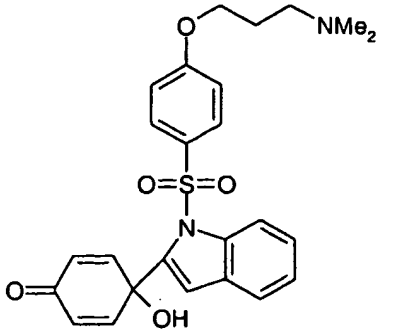

Me
O=S=O
N
O
OH
F

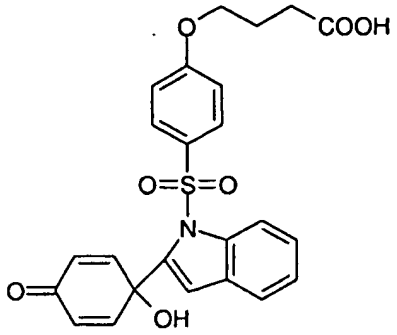


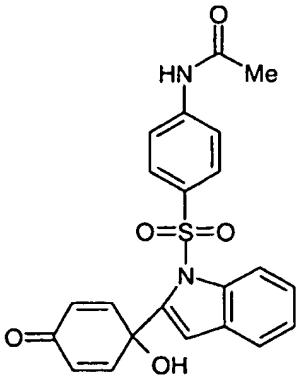


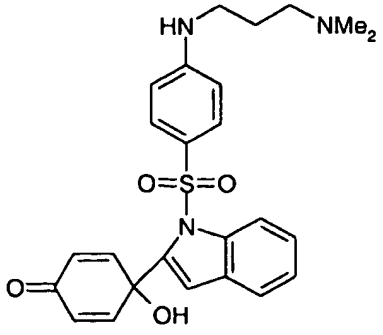





O
NMe2
O=S=O
N
O
OH


O
COOH
O=S=O
N
O
OH


O
HN
Me
O=S=O
N
O
OH


HN
NMe2
O=S=O
N
O
OH

130. (new) A composition comprising a compound according to claim 90 and a pharmaceutically acceptable carrier or diluent.

131. (new) A method for the treatment of a proliferative condition comprising administering to a subject suffering from said condition a therapeutically-effective amount of a compound according to claim 90.

132. (new) A method for the treatment of cancer comprising administering to a subject suffering from said cancer a therapeutically-effective amount of a compound according to claim 90.

133. (new) A method for the treatment of colon cancer or renal cancer comprising administering to a subject suffering from said cancer a therapeutically-effective amount of a compound according to claim 90.

134. (new) A method for the treatment of a condition mediated by thioredoxin/thioredoxin reductase comprising administering to a subject suffering from said condition a therapeutically-effective amount of a compound according to claim 90.

135. (new) A method of inhibiting thioredoxin/thioredoxin reductase in a cell, *in vitro* or *in vivo*, comprising contacting said cell with an effective amount of according to claim 90.

136. (new) A method of regulating cell proliferation, *in vitro* or *in vivo*, comprising contacting a cell with an effective amount of a compound according to claim 90.

137. (new) A method of (a) inhibiting cell proliferation; (b) inhibiting cell cycle progression; (c) promoting apoptosis; or (d) a combination of one or more of these, *in vitro* or *in vivo*, comprising contacting a cell with an effective amount of a compound according to claim 90.